Major journals

Statins and increased risk of diabetes: What relationship?

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This meta-analysis (Priess et al, 2011; summarised alongside) evaluates five statin trials with 32 752 participants without diabetes at baseline. Of these, 2749 developed diabetes – 1449 in the intensive-dose group and 1300 in the moderate-dose group (representing 2.0 additional cases in the intensive-dose group per 1000 patient-years).

There were also a significant number of cardiovascular events (*n*=6684; 3134 in the intensive-dose group and 355 in the moderate-dose group). Odds ratios were 1.12 (1.04–1.22) for new onset diabetes and 0.84 (0.75–0.94) for cardiovascular disease for participants with intensive-dose statin therapy compared with moderate-dose statin therapy. In actual terms this translates to one additional case of diabetes for every 498 people treated for 1 year compared with one few person experiencing a cardiovascular event for every 155 people treated for 1 year.

Should these data change our management of people at risk of cardiovascular events? These findings do corroborate other recent data suggesting excess risk of developing diabetes among people treated with statins compared with placebo (Ridker et al, 2008; Sattar et al, 2010), but the mechanisms remain to be established. In the interim, as increasing age increases cardiovascular risk, the evidence suggests continuing current practice for treating hyperlipidaemia with appropriate doses of statins in those at risk of cardiovascular disease.

Ridker PM, Danielson E, Fonseca FA et al (2008) Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med* **359**: 2195–207

Sattar N, Preiss D, Murray HM et al (2010) Statins and risk of incident diabetes: a collaborative meta-analysis of randomised statin trials. *Lancet* **375**: 735–42

BMJ

Benefit:risk ratio of intensive glucose lowering in CVD prevention uncertain

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 To determine all-cause mortality and deaths from cardiovascular disease (CVD) related to intensive blood glucose lowering treatment in people with T2D the authors undertook a meta-analysis of randomised controlled trials.

2 Intensive blood glucose lowering did not significantly affect all-cause mortality (risk ratio [RR], 1.04) or cardiovascular death (RR, 1.11).

Boussageon R, Bejan-Angoulvant T, Saadatian-Elahi M et al (2011) Effect of intensive glucose lowering treatment on all cause mortality, cardiovascular death, and microvascular events in type 2 diabetes: meta-analysis of randomised controlled trials. *BMJ* **343**: d4169

ARCHIVES OF INTERNAL MEDICINE

HbA_{1c} a good risk predictor for CVD

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓

1 A total of 35 954 people (1248 with T2D at baseline) were followed-up prospectively for cardiovascular disease (CVD) and models for CVD risk generated for men and women using traditional CVD risk factors with the addition of HbA_{1c} levels for those with T2D.

2 The authors found that, in women, the models including HbA_{1c} levels improved the C statistic by 0.177 (P<0.001) over the risk equivalence model; improvements for men were more modest but still statistically significant (P=0.02).

Paynter NP, Mazer NA, Pradhan AD et al (2011) Cardiovascular risk prediction in diabetic men and women using hemoglobin A1c vs diabetes as a high-risk equivalent. *Arch Intern Med* [Epub ahead of print]

JAMA

Intensive statin therapy increases risk of diabetes

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 The authors sought to further examine the relationship between statin therapy and excess risk of developing diabetes by assessing whether intensive-dose statin therapy is associated with increased risk of new-onset diabetes compared with moderate-dose statin therapy.

2 Relevant trials in MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials (1 January 1996–31 March 2011) were collected and unpublished data were obtained from investigators.

3 Randomised controlled end-point trials that compared intensive-dose statin therapy with moderate-dose statin therapy and included more than 1000 participants who were followed-up for more than 1 year were included.

4 In the five statin trials identified (*n*=32 752), 2749 participants without diabetes at baseline developed the condition; 1449 of whom had received intensive-dose therapy, 1300 moderate-dose therapy.

5 The between-group difference in new-onset diabetes represented 2.0 additional cases in the intensive-dose group per 1000 patient-years.

6 Odds ratios were 1.12 (95% confidence interval [CI], 1.04–1.22; I^2=0%) for new-onset diabetes and 0.84 (95% CI, 0.75–0.94; I^2=74%) for cardiovascular events for participants receiving intensive therapy compared with moderate-dose therapy.

7 The authors concluded that intensive-dose statin therapy was associated with an increased risk of new-onset diabetes compared with moderate-dose statin therapy.

Preiss D, Seshasai SR, Welsh P et al (2011) Risk of incident diabetes with intensive-dose compared with moderate-dose statin therapy: a meta-analysis. *JAMA* **305**: 2556–64